IN THE CLAIMS

Please delete claims 1-48

Before the claims, please insert What is claimed is:

49. (NEW) A method of welding a plurality of overlapping members having a tenacious surface oxide layer, the method comprising the steps of:

melting said members at a predetermined location to form a weld pool; and

disturbing the weld pool by introducing a disturbing member into the weld pool.

50. (NEW) The method as claimed in claim 49, wherein the step of melting the members to form the weld pool is achieved by a using a plasma arc torch.

51. (NEW) The method as claimed in claim 49, further including the step of clamping the overlapping members prior to forming the weld pool.

52. (NEW) The method as claimed in claim 49, wherein the disturbing member is consumable.

53. (NEW) The method as claimed in claim 52, wherein the disturbing member has a composition substantially similar to that of the metal forming the plurality of members.

54. (NEW) The method as claimed in claim 49, wherein the disturbing member is non-consumable.

55. (NEW) The method as claimed in claim 49, wherein the step of disturbing the weld pool comprises the steps of advancing the disturbing member into the weld pool at a speed of advance and to a predetermined depth, and then withdrawing the disturbing member at a speed of withdrawal.

56. (NEW) The method as claimed in claim 55, further including the intermediate step of holding the disturbing member in the weld pool for a predetermined time.

57. (NEW) The method as claimed in claim 55, wherein the speed of advance and the speed of withdrawal of the disturbing member is variable.

58. (NEW) The method as claimed in claim 55, wherein, the speed of withdrawal is at least equal to the speed of advance.

59. (NEW) The method as claimed in claim 49, wherein movement of the disturbing member is at a relatively shallow angle to the plane of the weld.

60. (NEW) The method as claimed in claim 59, wherein the angle is greater than 30°.

61. (NEW) The method as claimed in claim 60, wherein the angle is less than 45°.

62. (NEW) The method as claimed in claim 49, wherein the disturbing member is introduced into the weld pool to one side thereof to promote a stirring effect.

63. (NEW) The method as claimed in claim 49, the method including disturbance of the weld pool by a welding gas.

64. (NEW) The method as claimed in claim 63, wherein the gas is caused to impinge on the weld pool at an angle and in a manner to promote swirling of the weld pool.

65. (NEW) The method as claimed in claim 49, wherein the weld pool is supported from beneath.

66. (NEW) The method as claimed in claim 50, wherein the step of disturbing the weld pool includes disturbance by pulsing a welding current of theplasma arc torch.

67. (NEW) A welding apparatus for welding a plurality of overlapping members having a tenacious surface oxide layer, the apparatus comprising a plasma arc torch operable to form a weld pool in a work piece, and a weld pool distrubuter including a disturbing member which is movable into the weld pool to a depth sufficient to penetrate the overlapping oxide layers present in the weld pool.

68. (NEW) The apparatus as claimed in claim 67, and including a weld pool supporting member.

69. (NEW) The apparatus as claimed in claim 67, wherein the disturbing member is consumable.

70. (NEW) The apparatus as claimed in claim 69 wherein the disturbing member includes a wire having a composition substantially similar to that of the workpiece.

71. (NEW) The apparatus as claimed in claim 70, wherein the wire is movable by a feed mechanism.

72. (NEW) The apparatus as claimed in claim 71, wherein the feed mechanism is operable to move the wire at least one predetermined feed rates relative to the weld pool, in use.

73. (NEW) The apparatus as claimed in claim 71, wherein the feed mechanism includes guide means to guide the wire or filament to a predetermined location in the weld pool.

74. (NEW) The apparatus as claimed in claim 67, wherein the disturbing member is non-consumable.

75. (NEW) The apparatus as claimed in claim 68, wherein the support member comprises a support surface having a recess adapted to support the weld pool.

76. (NEW) The apparatus as claimed in claim 75, wherein the support member is adapted to allow the recess to vent when the weld pool is formed.

77. (NEW) The apparatus as claimed in claim 68, the supporting member including a body having an insert, the insert defining the support surface, wherein the insert is manufactured from a material having a lower thermal conductivity than the material of the body.

78. (NEW) The apparatus as claimed in claim 68, wherein the supporting member is provided with a cooling system.

79. (NEW) The apparatus as claimed in claim 68, wherein the supporting member has a peripheral raised edge against which the work piece is received.

80. (NEW) The apparatus as claimed in claim 67, wherein the plasma arc torch and a supporting member are movable relative to one another to enable the work piece to be clamped therebetween.

81. (NEW) The apparatus as claimed in claim 67, wherein an electric welding current of the plasma torch is pulsable during welding to assist disturbance of the oxide layer